Submission on developing the New Zealand Aerospace Strategy.

Your name and organisation

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Organisation (if applicable)	M Aerospace.

Overview of the Aerospace Strategy.

Question 1:	Do the four areas above provide the right basis for the Aerospace Strategy?
Question 2:	What are the critical factors that you see for aerospace sector development?
Question 3:	How would an Aerospace Strategy help you?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

1. What four areas above? This document lists no such four areas. The web page (www.mbie.govt.nz/have-your-say/aotearoa-new-zealand-aerospace-strategy) lists:
   - Overview of the Aerospace Strategy.
   - A strategy for building our aerospace sector.
   - Building strong foundations (three pillars).
   - Goals for the 2030 future state.
   - Pathway to the 2030 future state.

   Is that what you mean? If so, so far it's weak, I assume version, and hence this submission invitation.
2. Critical factors:
   - 2.1. Starting at the beginning, education. Currently there is only the University of Auckland masters degree in aerospace engineering (www.auckland.ac.nz/en/study/study-options/find-a-study-option/master-of-aerospace-engineering-maerospaceeng.html), and some reach-out by Rocket Lab to school students. Having started that degree, I can say that is an excellent programme; more would be advantageous. In other countries, a bachelors degree in aerospace exists; that, and more lower level education pathways would benefit. The aerospace sector is very large, so diversifying study programmes available would also benefit.
   - 2.2. Then, working in the industry; that means working for an existing company, or starting one.
     - 2.2.1. The aerospace industry requires the highest exacting standards (engineering and otherwise), so existing aerospace companies require staff with experience, more so than other industries. Which re-visits the chicken and egg problem of where does someone get aerospace experience? Especially engineering; people from other fields (marketing, for example) can easily hop from one industry to aerospace; engineering less so. Being able to get aerospace experience (especially engineering) needs to be addressed. Rocket Lab have an apprenticeship scheme; this is something.
     - 2.2.2. Starting an aerospace company seems like a steep hill to climb. I can organise one, and establish staff, those parts are easy. That leaves funding; is there government funding available? Or just angel (etc.) investors. And a location. Finding a location in Auckland, where I am, is possible, however locations for engine testing? A launch ground station?

I've looked around the country for potential launch sites, and Mahia is one of the few, because of the existing farm land and-or sites protecting native wild-life, etc. Where will I build a space-port? What are the restriction on flights, for testing, and for launches? Altitude, and geographic location restrictions? Guide-lines? What co-ordination with other launch operators is required? More transparency please.

3. I have a concept of a start-up company, which I want to establish into a fully functional New Zealand based aerospace company. And since New Zealanders specialise in doing things our way, I want it to operate in a unique market within the aerospace industry. Having a government aerospace strategy which is strongly oriented at growth of aerospace companies in the short time and the long term will greatly assist that.

Area One - A strategy for building our aerospace sector

Question 4:	Is the 2030 Future State set out in a way that enables New Zealand to build on its existing advantages to develop a leading place in the global aerospace economy?
Question 5:	Will the 2030 Future State support your ambitions for growth and participation in the sector?
Question 6:	What barriers are there to optimising sector growth?
Question 7:	How could the government and the sector work together to achieve the 2030 Future State?
Question 8:	How can the Government enable Māori ambitions for the sector?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

4. Yes.
5. Yes.
6. Some points listed above.
7. Co-ordination, such as this submission is inviting. Each entity finding out what the other needs, and working together to achieve them.
8.

Area Two - Building strong foundations (Three Pillars)

Question 9:	What do you think of the Three Pillars and do you think they will support the 2030 Future State?
Question 10:	What else would you like to see in the Three Pillars?
Question 11:	What actions and initiatives could the sector focus on to support the Three Pillars?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

9. Yes, good start, please continue.
10. As given above.

Area Three - Goals for 2030.

Question 12:	What do you think of the Goals for 2030?
Question 13:	Are the goals framed in a way that will enable New Zealand to build on its strengths and comparative advantages to achieve the 2030 Future State?
Question 14:	What activities and milestones can help us achieve these Goals?
Question 15:	Where do you see yourself in realising these Goals?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

12. Goal one, is more aeronautics than aerospace. We have an established aeronautics industry.
    Goal two. Same.
    Goal three sounds great, but is a bit vague. Kiwis innovate, so we can be at the fore-front of innovation, invention and engineering, however a New Zealand aerospace industry is highly unlikely to reach the scale of what exists in other countries.
    Goal four, ditto. In the sense that Rocket Lab supported the current Nasa programme to the moon by launching Capstone? Yes, that works. Putting people in space is a significant leap over putting a satellite in space. Rocket Lab will be launching their crew capable space craft, "Neutron," from the U.S.A., for example. Can we put people in space? Sure. Should we? That will require an extensive cost-benefit analysis, over several decades.
    Goal five. Kiwis have long been very good in the computer industry, and management, so we can definitely leverage that.
    However, these are not goals. Goals are very specific, exact measurable targets that are either done or not done. What you have presented are purposes, not goals.
13. No, they are not goals. As purposes, yes.
14. Establishing more education path-ways and programmes. Points in answer 2.
15. By getting the aerospace start-up company I mentioned operating, viable, and employing lots of kiwis.

Area Four - Pathway to the 2030 Future State.

Question 16:	What policies, ideas, actions, and-or initiatives would you like to see in the Action Plan to help achieve the ambitious 2030 Future State?
Question 17:	What would be the benefits of these actions and how would they help grow the New Zealand aerospace sector?
Question 18:	How would you like to be involved in the delivery of the Aerospace Strategy?

Please type your submission below. If applicable, please indicate the question(s) to which you are responding.

16. As above.
17. Establishing New Zealand as a leader in the aerospace, and derivative industries.
18. In building my aerospace company, co-ordinating with other operators, and the government.